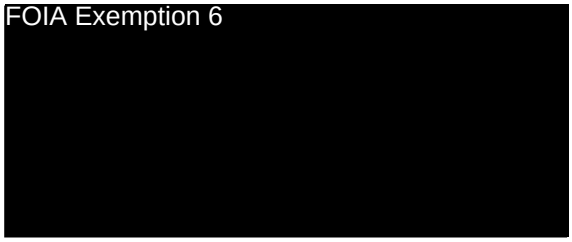

March 5, 2015

Ms. Nancy Rumrill
U.S. Environmental Protection Agency, Region 9
Drinking Water Protection Section
Mail Code WTR-3-2
75 Hawthorne Street
San Francisco, CA 94105

SUBJECT: Draft Class III Underground Injection Control Area Permit
Permit Number R9UIC-AZ3-FY11-1, Florence Copper, Inc.
Florence Copper, Inc.

Dear Ms. Rumrill:

The above-referenced UIC Area Permit should not be issued for the following reasons:

- There has never been a commercially viable in-situ mine anywhere in the US that has successfully restored the groundwater to its pre-mining condition.

- The EPA's own data from the BHP Copper Florence In-Situ Project (*Technologically Enhanced Naturally Occurring Radioactive Materials in the Southwestern Copper Belt of Arizona*, October 1999), shows that "...the PLS produced from the Magma Florence in-situ projects contain very high levels of radionuclides and that they are leachable." There is no reason to believe that the results of the Florence Copper two-year "pilot test facility" in the same location will produce different results. High levels of radionuclides pose a significant health threat to the nearby residential developments, retail businesses, public and private schools and medical facilities.

- Following BHP's test, monitoring revealed exceedances of Arizona Aquifer Water Quality Standards (AWQS) for radiochemicals and other parameters such as magnesium, fluoride and total dissolved solids. In 1998 BHP encountered radiochemical concentrates that ADEQ considered high. Once again in 2001, lab analysis of groundwater samples revealed high radiochemical results. Again in 2003, groundwater sampling results revealed elevated total radium and radon 222 levels. A 2004 report from a previous site owner noted radiochemical exceedances for December 2003 monitoring well samples: Four AWQS exceedances for adjusted alpha and seven exceedances for total radium. In January 2012, after Curis/Florence Copper purchased

the property, they reported alert level exceedances for sulfate, magnesium and total dissolved solids. These exceedances were discovered 14 years after BHP discontinued their short-term pilot test operations. When there have been exceedances reported from 1998 to 2012 emanating from a short-term test, how can the EPA even consider a two-year pilot test? What proof is there that exceedances will not continue from the previous test and be added to by the two-year PTF? The fact that the EPA requires significantly long periods of monitoring beyond the two-year life of the PTF, indicates that decisions regarding success or failure of the PTF should not be made soon after the end of the two-year period. If the UIC permit is issued, there should be a very long "buffer period" between the end of the PTF and any consideration of a UIC permit for commercial operations.

- The proposed pilot test is an unrealistic small-scale experiment that can be manipulated and cannot be assumed to be transferrable to a large-scale operation because of the exceptional resources and favorable conditions that often accompany a pilot study. The two-year term of the pilot test cannot prove that the acid solution has not migrated outside the test area because of the short time-frame.

- There are a large number of chemicals, including sulfuric acid, diluting agents such as kerosene, alcohols, lime, sodium hydroxide, gasoline, and diesel fuel that will be transported, stored and utilized on the site that pose a threat of accidents, toxic leaks, pipeline breaks and spills, contamination of soil and groundwater and, in the case of the SX/EW plant, a known risk of fire and explosion. Evaporation impoundment breaches and liner failures would pose a danger to wildlife and birds and also contaminate soil and groundwater.

- The leaching process mobilizes not just the copper, but many other undesirable minerals and contaminants. The solutions are recycled through the injection and extraction system multiple times in order to concentrate copper to commercially viable levels, which results in these contaminants being concentrated in the solution as well. These contaminants could escape through the fractured bedrock or could be airborne or leaked when pumped into the evaporation impoundment.

- When the UIC permit was issued for BHP's pilot test, only one or two people commented on BHP's permit application because very few people were impacted by BHP's operations. Today, the entire project area is within Town of Florence boundaries and over 2,000 homes have been constructed along with retail businesses, public and charter schools and a hospital and medical offices. The project is within 1.2 miles of a Johnson Utilities groundwater well, 1.5 miles of existing homes, and less than ½ mile from properties already zoned for residential homes. The project will potentially impact thousands of down-gradient residents and businesses. The context and environment within which BHP's pilot test was conducted 14 years ago are far from comparable to today's surrounding community, water usage and groundwater conditions.

- The Draft UIC permit as issued does not contain any provision for financial responsibility naming the EPA. It is extremely disconcerting that the EPA does not specify in the draft permit for the public's information exactly what Florence Copper will be required to provide in the way of financial guarantees against failure to protect the environment as required by the permit. Past history demonstrates that the cost of decontamination and cleanup after an environmental disaster place a huge burden on the taxpayers who are ostensibly being protected by regulatory agencies. Notwithstanding the cost of cleaning up the site itself, no provision is made for the losses that would be incurred by residents and businesses should a failure occur.

- The EPA is taking a huge risk in relying on assumptions and models provided by a company that has never operated an in-situ copper recovery project. This is like having a fox guard a henhouse. The EPA's experience has been primarily with in-situ uranium mines. In-situ copper mining uses different chemicals and processes (such as SX/EW) than uranium requires and uranium projects have not been all that safe. All of the data submitted by Florence Copper is either very old or doesn't come from actual experience but from FCI-created assumptions and models. The EPA's own Statement of Basis acknowledges this. There is also a large body of data that has not been provided to the EPA that should be considered before assuming that BHP's test was successful.

- Allowing a pilot test (in other words an experiment) with the site's close proximity to existing and planned development and within the boundaries of an incorporated town is inconceivable. If this project were proposed in the middle of Phoenix or Scottsdale, the EPA wouldn't even consider it.

- The proposed PTF is on a 160-acre, island parcel of State-owned land in the middle of Florence. If the PTF were <u>not</u> on State-owned land, Florence Copper would not be able to operate because all of their surrounding land was zoned for residential/retail development <u>before</u> they bought it. Before the Town of Florence twice denied a change of zoning to allow a commercial in-situ copper mine, FCI officials publicly stated that it would not be economically feasible to mine only the State land parcel. After the denial, they suddenly determined that it would be feasible. It should concern the EPA that Florence Copper might not have the financial wherewithal to pay for abandonment and post-closure monitoring if they do not have access to mine the larger parcel. The current makeup of the Florence Town Council is unanimously opposed to a change of zoning for FCI's land and it is anticipated to remain that way for many years. Taseko, the company that bought Curis Resources in late 2014 and is now the owner of Florence Copper, has been downgraded by some stock analysts based on their perception that Taseko may be over-extended financially. Their stock is trading in the $0.80US range, which would be considered very risky by the average investor. The financial viability of Taseko's wholly-owned subsidiary, Florence Copper Inc., should also be considered risky.

There is significant opposition to FCI's proposed PTF. We hope the EPA will look not only at the question of whether or not FCI can maintain hydraulic control, but whether or not it

is in the best interest of taxpayers, homeowners, businesses, schools and medical facilities to permit an environmentally risky experiment within the boundaries of an incorporated town. Don't just conclude that the PTF meets your scientific requirements. There are human beings who will be negatively affected by your decision should you decide to finalize the UIC permit and you should not ignore that. Your agency is meant to represent the public interest -- not corporations and moneyed interests.

Sincerely,

Karen J. Wall

John C. Wall